

**IN THE UNITED STATES DISTRICT COURT  
THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

CDN INNOVATIONS, LLC

Plaintiff,

v.

ON SEMICONDUCTOR CORPORATION

Defendant.

**Civil Action No. 6:20-cv-446**

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff CDN Innovations, LLC (“CDN” or “Plaintiff”), for its Complaint against Defendant ON Semiconductor Corporation, (referred to herein as “ON Semiconductor” or “Defendant”), alleges the following:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

**THE PARTIES**

2. Plaintiff CDN is a limited liability company organized under the laws of the State Georgia with a place of business at 44 Milton Avenue, Suite 254, Alpharetta, GA 30009.

3. Upon information and belief, ON Semiconductor is a corporation organized under the laws of the State of Delaware with a place of business at 5005 E. McDowell Road, Phoenix, AZ 85008. Upon information and belief, ON Semiconductor sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States.

## **JURISDICTION AND VENUE**

4. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

6. Venue is proper in this judicial district under 28 U.S.C. § 1400(b).

7. This Court has personal jurisdiction over the ON Semiconductor under the laws of the State of Texas, due at least to their substantial business in State of Texas and in this judicial district, directly or through intermediaries, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct and/or deriving substantial revenue from goods and services provided to individuals in the State of Texas. Venue is also proper in this district because ON Semiconductor has a regular and established place of business in this district. For instance, ON Semiconductor has office in this judicial district. For example, ON Semiconductor has an office located at 7500 Rialto Blvd Building 2, #145, Austin, TX 78735.

## **BACKGROUND**

### **The Inventions**

#### **Adaptive Power Control**

8. Sinikka Sarkkinen, Jari Isokangas, and Dimitris Koulakiotis (hereinafter “the Inventors”) are the inventors of U.S. Patent Nos. 7,006,844 (“the ’844 patent”) and 7,860,462 (“the ’462 patent”). A true and correct copy of the ’844 patent is attached as Exhibit A. A true and correct copy of the ’462 patent is attached as Exhibit B.

9. The ’844 and ’462 patents resulted from the pioneering efforts of the Inventors in the area of data transmissions in a wireless communication network, and more particularly the dynamic control of the power level of multicast data transmission. These efforts resulted in the

development of a method and apparatus for adaptive power control for multicast transmission in 2002.

**COUNT 1 – INFRINGEMENT OF U.S. PATENT NO. 7,006,844**

10. The allegations set forth in the foregoing paragraphs are incorporated into this Count.

11. On February 28, 2006, the '844 patent was duly and legally issued by the United States Patent and Trademark Office under the title “Adaptive power control for multicast transmission”.

12. CDN is the assignee and owner of the right, title and interest in and to the '844 patent, including the right to assert all causes of action arising under said patent and the right to any remedies for infringement of it.

13. Upon information and belief, ON Semiconductor has and continues to directly infringe one or more claims of the '844 patent by making, using (e.g., developing, testing, installing or otherwise using) offering to sell, selling, or importing into the United States products, specifically one or more of the products identified in C hereto (the “*Accused 802.11 Instrumentalities*”). For example, upon information and belief, ON Semiconductor at least uses, sells and offers to sell the *Accused 802.11 Instrumentalities* in United States.

14. Exemplary infringement analysis showing infringement of at least claim 23 of the '844 patent is set forth in Exhibit C. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by ON Semiconductor with respect to the '844 patent. CDN reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '844 patent.

15. Upon information and belief, users of devices containing ON Semiconductor's *Accused 802.11 Instrumentalities* have and will continue to directly infringe at least claim 23 of the '844 patent.

16. Upon information and belief, ON Semiconductor had knowledge of the '844 patent at least as early as its receipt of this complaint. Defendant ON Semiconductor also had knowledge of the '844 patent and its infringement thereof at least as early as its receipt on April 14, 2020 of CDN's letter to Quantenna Connectivity Solutions, a division of ON Semiconductor, identifying infringement of the '844 patent.

17. ON Semiconductor's encouragement of others to use the *Accused 802.11 Instrumentalities*—knowing that such use, as alleged herein, infringes at least claim 23 of the '844 patent—constitutes inducement of others under 35 U.S.C. § 271(b). ON Semiconductor's encouragement of infringement includes actively advertising, promoting and distributing technical information through its website (and other sources) that the *Accused 802.11 Instrumentalities* are not only compliant with the IEEE Std 802.11. Standard ("802.11") but specifically intended for use as an 802.11 product. For example, the website of Quantenna, acquired by ON Semiconductor, describes one of its Wi-Fi enable chipsets as follows: "QSR1000 is the pioneering 4x4 MIMO 802.11ac chipset solution that conquers the Gigabit per second throughput over Wi-Fi barrier, thus providing higher data capacity to more devices around the home or office. QSR1000 also enhances Wi-Fi networks with Multi-User MIMO (MU-MIMO), a Technology that further boosts the capacity of a Wi-Fi Network with compatible MU-MIMO client devices." <https://www.quantenna.com/products/qsr1000/>. Elsewhere on this website, the QSR2000 product is described as "Leveraging the success of the award-winning QSR1000, Quantenna adapted its superior 4-stream technology in both the 2.4GHz and 5GHz

bands and introduced its dual-band selectable QSR2000C family of products. The QSR2000C is ideally adapted to high performance Media Players, Consumer devices and Set-Top Boxes. Combined with QSR1000 Access Points in 5Ghz Band, QSR2000C will ensure a superior user experience by providing high quality Wi-Fi service at the longest range. The QSR2000C 2.4GHz interface provides universal connectivity to all legacy Access Points. In addition, QSR2000C when paired with QSR10G provides the farthest reach in 2.4GHz band in the market.”.

<https://www.quantenna.com/products/qsr2000c/> (last visited 05/28/2020). The Quantenna QV842C Product Brief linked from the forgoing page describes the product as a “4x4 802.11ac Wave 2 Dual Band Selectable Solution”. <https://www.quantenna.com/wp-content/uploads/2018/04/QV842C-V1.4.pdf> (last visited 05/28/2020). Such conduct demonstrates ON Semiconductor’s specific intent (or at least willful blindness) to actively aid and abet others to infringe, including but not limited to ON Semiconductor’s partners and downstream customers, whose use of the *Accused 802.11 Instrumentalities* constitutes direct infringement of at least claim 23 of the ’844 patent.

18. Upon information and belief, ON Semiconductor is also liable as a contributory infringer of the ’844 patent under 35 U.S.C. § 271(c) by offering to sell, selling and/or importing into the United States componentry especially made to comply with 802.11 Standard which, as shown in Exhibit C, constitutes an infringement of the ’844 patent. The *Accused 802.11 Instrumentalities* are material components for use in practicing the ’844 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

19. The Accused Instrumentality infringed and continues to infringe at least claim 23 of the ’844 patent during the pendency of the ’844 patent.

20. CDN has been harmed by the ON Semiconductor's infringing activities.

**COUNT 2 – INFRINGEMENT OF U.S. PATENT NO. 7,860,462**

21. The allegations set forth in the foregoing paragraphs are incorporated into this Count.

22. On December 28, 2010, the '462 patent was duly and legally issued by the United States Patent and Trademark Office under the title "Adaptive power control for multicast transmission" [sic].

23. CDN is the assignee and owner of the right, title and interest in and to the '462 patent, including the right to assert all causes of action arising under said patent and the right to any remedies for infringement of it.

24. Upon information and belief, ON Semiconductor has and continues to directly infringe one or more claims of the '462 patent by making, using (e.g., developing, testing, installing or otherwise using) offering to sell, selling, or importing into the United States products, specifically one or more of the products identified in Exhibit D hereto (the "*Accused 802.11 Instrumentalities*"). For example, upon information and belief, ON Semiconductor at least uses, sells and offers to sell the *Accused 802.11 Instrumentalities* in United States.

25. Exemplary infringement analysis showing infringement of at least claims 15 and 19 of the '462 patent is set forth in Exhibit D. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by ON Semiconductor with respect to the '462 patent. CDN reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '462 patent.

26. Upon information and belief, users of devices containing ON Semiconductor's *Accused 802.11 Instrumentalities* have and will continue to directly infringe at least claims 15 and 19 of the '462 patent.

27. Upon information and belief, ON Semiconductor had knowledge of the '462 patent at least as early as its receipt of this complaint.

28. ON Semiconductor's encouragement of others to use the *Accused 802.11 Instrumentalities*—knowing that such use, as alleged herein, infringes at least claims 15 and 19 of the '462 patent—constitutes inducement of others under 35 U.S.C. § 271(b). ON Semiconductor's encouragement of infringement includes actively advertising, promoting and distributing technical information through its website (and other sources) that the *Accused 802.11 Instrumentalities* are not only compliant with the IEEE Std 802.11. Standard ("802.11") but specifically intended for use an 802.11 product. For example, the website of Quantenna, acquired by ON Semiconductor, describes one of its Wi-Fi enable chipsets as follows: "QSR1000 is the pioneering 4x4 MIMO 802.11ac chipset solution that conquers the Gigabit per second throughput over Wi-Fi barrier, thus providing higher data capacity to more devices around the home or office. QSR1000 also enhances Wi-Fi networks with Multi-User MIMO (MU-MIMO), a Technology that further boosts the capacity of a Wi-Fi Network with compatible MU-MIMO client devices." <https://www.quantenna.com/products/qsr1000/>. Elsewhere on this website, the QSR2000 product is described as "Leveraging the success of the award-winning QSR1000, Quantenna adapted its superior 4-stream technology in both the 2.4GHz and 5GHz bands and introduced its dual-band selectable QSR2000C family of products. The QSR2000C is ideally adapted to high performance Media Players, Consumer devices and Set-Top Boxes. Combined with QSR1000 Access Points in 5Ghz Band, QSR2000C will ensure a superior user

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29. Upon information and belief, ON Semiconductor is also liable as a contributory infringer of the ’462 patent under 35 U.S.C. § 271(c) by offering to sell, selling and/or importing into the United States componentry especially made to comply with 802.11 Standard which, as shown in Exhibit D, constitutes an infringement of the ’462 patent. The *Accused 802.11 Instrumentalities* are material components for use in practicing the ’462 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

30. The Accused Instrumentality infringed and continues to infringe at least claim 15 and 19 of the ’462 patent during the pendency of the ’462 patent.

31. CDN has been harmed by the ON Semiconductor’s infringing activities.

### **JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, CDN demands a trial by jury on all issues triable as such.



**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff CDN demands judgment for itself and against ON Semiconductor as follows:

- A. An adjudication that the ON Semiconductor has infringed the patents asserted herein;
- B. An award of damages to be paid by ON Semiconductor adequate to compensate CDN for ON Semiconductor's past infringement of the patents asserted herein, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;
- C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of CDN's reasonable attorneys' fees; and
- D. An award to CDN of such further relief at law or in equity as the Court deems just and proper.

Dated: May 29, 2020

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